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PA - (NIPQ) DAINIPPON PRINTING CO LTD

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XIC - C09K-019/32 ; H05B-033/08 ; H05B-033/14 ; H05B-033/22

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AB - JP2000068052 NOVELTY - The driving of liquid crystal element is performed at a temperature range, in which the liquid crystal phase exhibits highest liquid crystal property.

- DETAILED DESCRIPTION - Charge transparent material of liquid crystal is rod-shaped molecule which is based on the relation $l+m+n=1-4$ and l , m , n represent integers 0-4 respectively having respective 6 pi, 10 pi and 14 pi electronic group aromatic rings. Each electronic group aromatic ring is connected to charge transport material or with connection group which has mutually carbon-carbon double bond or carbon-carbon triple bond. The charge transport portion and light emission portion of the element are of monolayer structure.

Alternately the charge transport material is

(2-4'-octylphenyl)-6-dodecyloxynaphthalene, Crystal -79.3 deg.

C-SmB-100.4 deg. C-SmA-121.3 deg. C-Iso. The temperature range of the driving shows a smectic B phase. The charge transport material is polymeric material containing liquid crystal material in principal chain or side chain. The liquid crystal material has charge transport material and fluorescent material, which exhibits polarization when electroluminescence light is emitted.

- USE - As material of photoreceptors such as copier, printer and electroluminescence material.

- ADVANTAGE - Superior quality liquid crystal element can be driven. Prevents inhibition of the row of liquid crystal molecule by introducing fluorescent material to charge transport material, for exhibiting fluorescent property.

- DESCRIPTION OF DRAWING(S) - The figure shows the model diagram of electroluminescence element.

- (Dwg.1/5)

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NC - 001

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**TI - Liquid crystal element driving method for copier, printer involves
operating element at temperature range in which liquid crystal phase
exhibits highest liquid crystal property**